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| DOAN, KIET M | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/583,894

Applicant(s)

RUNE, JOHAN

Examiner

KIET DOAN

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 January 1951.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-893)
Paper No(s)/Mail Date 06/22/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1, 4, 5, 9, 11, 13, 20, 22, 25, 28, 31, 36, 39, 45 and 51 are objected to because of the following informalities:

Claims 1, 28 and 45, the phrase
diversity handover, DHO, related... change to diversity handover (DHO) related...
Radio Network Controller, RNC, and ... change to Radio Network Controller (RNC)...

Claims 4, 20, 22, 31 and 46, the phrase parameters are **UDP** ports. **UDP** need to spelling out.

Claims 5 and 32, the phrase parameter are **SUGR** parameters. **SUGR** need to spelling out.

Claims 9 and 36, the phrase
Connection frame number, CFN, pertaining... change to Connection frame number
(CFN) pertaining...
Dedicated Channel Frame Protocol, DCH FP, in a UMTS Terrestrial Radio Access
Network, UTRAN... change to Dedicated Channel Frame Protocol (DCH FP) in a UMTS
Terrestrial Radio Access Network (UTRAN).

Claims 11 and 37, the phrase
Node B Application Part, NBAP, message change to Node B Application Part (NBAP)
message

Claims 13 and 39, the phrase message is a **RNSAP** message. **RNSAP** need to spelling out.

Claims 25 and 51, the phrase

Destination Unreachable Internet Control Message Protocol, ICMP, message change to

Destination Unreachable Internet Control Message Protocol (ICMP) message

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 28 and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 28 and 45, the phrase “e.g. a Node B” and “planned to be a part” and “such as” renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 26-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. It is noted that computer programs or computer program products do not define any structural and functional interrelationships between computer program and other claimed elements of computer which permit the

computer program's functionality to be realized. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 7-15, 23, 24, 28, 30, 34-41, 45 and 49-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beming et al. (US 2003/0003919 A1) in view of Wang (US 5,539,922).

Consider **claims 1, 26-28 and 45**. Beming teaches a method for providing diversity handover, DHO, related instructions to a first DHO tree node, e.g. a Node B, that is a part of or is planned to be a part of a DHO connection in a mobile telecommunication network, wherein the DHO functionality is distributed to one or a plurality of DHO nodes, such as a Radio Network Controller, RNC, and its connected Node Bs, in said network, (Paragraphs [0068-0069] Fig.2A and Fig.2B illustrate and described) the method comprising:

including in a first signaling message one or more transport layer addresses and one or more transport bearer reference parameters in order to direct one or more data flows of the DHO connection (Paragraphs [0083-0086]).

Beming fails to explicitly teach

sending said first signaling message to the first DHO tree node.

In an analogous art, **Wang teaches** sending said first signaling message to the first DHO tree node (Col.2, lines 1-10, Col.7, lines 65-67, Col.8, lines 1-13, Fig.1 teach node receiving first messages).

Therefore, it would have been obvious at the time that the invention was made to modify Beming with Wang system's such that sending messages to node including transport layer address to direct data flows of the DHO connection in order to keep track of location/position of mobile device when handing from one node to the other.

Consider **claims 2 and 29**. The combination of Beming and Wang teach the method according to claim 1. Further, Wang teaches wherein the including-step comprises the further step of: replacing the transport layer address and transport bearer reference parameter of an RNC by the transport layer address and transport bearer reference parameter of a DHO tree node that is hierarchically higher than said first DHO tree node in a regular signaling message sent to the first DHO tree node in order to direct a data flow between said first DHO tree node and said higher DHO tree node in the DHO tree node hierarchy (Col.3, lines 39-60, Col.8, lines 1-5, 40-47, Fig.6 to Fig.8 show the decision of adding new layer address).

Consider **claims 3 and 30**. The combination of Beming and Wang teach the method according to claim 1. Further, Wang teaches wherein the including-step comprises the further step of: including one or more transport layer addresses and one or more transport bearer reference parameters of one or more DHO tree node(s) that

are hierarchically lower than the first DHO tree node in a signaling message sent to the first DHO tree node in order to direct one or more data flows between said first DHO tree node and said one or more lower DHO tree node(s) in the DHO tree node hierarchy (Col.3, lines 39-60, Fig.6 to Fig.8 illustrate and described).

Consider **claims 7 and 34**. The combination of Beming and Wang teach the method according to claim 1. Further, Wang teaches comprising the step of: including timing parameters in the first signaling message to be used in the uplink combining procedure in the DHO tree node receiving said first signaling message (Col.4, lines 5-15).

Consider **claims 8 and 35**. The combination of Beming and Wang teach the method according to claim 1. Further, Wang teaches comprising the step of: including a time indication in the first signaling message indicating when the DHO related instructions in the first signaling message are to be effectuated in the DHO tree node receiving said first signaling message (Col.7, lines 65-67, Col.8, lines 1-13, Fig.6 illustrate and described).

Consider **claims 9 and 36**. The combination of Beming and Wang teach the method according to claim 8. Further, Beming teaches wherein said time indication is a connection frame number, CFN, pertaining to a Dedicated Channel Frame Protocol, DCH FP, in a UMTS Terrestrial Radio Access Network, UTRAN (Paragraphs [0038],

[0057-0058], [0088]).

Consider **claims 10**. The combination of Beming and Wang teach the method according to claim 1. Further, Beming teaches wherein said first signaling message is sent from a RNC (Paragraphs [0050-0060]).

Consider **claims 11 and 37**. The combination of Beming and Wang teach the method according to claim 10. Further, Beming teaches wherein said first signaling message is a Node B Application Part, NBAP, message (Abstract, line(s) 8, Paragraphs [0027]).

Consider **claims 12 and 38**. The combination of Beming and Wang teach the method according to claim 10. Further, Beming teaches wherein the step of sending said first signaling message is triggered by a second signaling message received from a second RNC (Paragraphs [0069-0071], Fig.2A, show RNC 26/2 as read on second RNC).

Consider **claims 13 and 39**. The combination of Beming and Wang teach the method according to claim 12. Further, Beming teaches wherein the second signaling message is a RNSAP message (Paragraphs [0027], [0032]).

Consider **claims 14 and 40**. The combination of Beming and Wang teach the method according to claim 12. Further, Wang teaches wherein the second signaling message includes the same DHO related instructions and associated parameters as said first signaling message (Col.8, lines 40-50).

Consider **claims 15 and 41**. The combination of Beming and Wang teach the method according to claim 14. Further, Wang teaches wherein said second signaling message further comprises a destination node transport layer address of the first DHO tree node that is the intended recipient of said DHO related instructions (Fig.6 step 314 and Fig.7 step 348 as read on destination node transport layer address).

Consider **claims 23 and 49**. The combination of Beming and Wang teach the method according to claim 1. Further, Wang teaches wherein the method comprises the further step of: terminating DHO functionality at the first DHO tree node for a macro diversity leg towards a hierarchically lower DHO tree node based on the absence of expected uplink data packets from the hierarchically lower DHO tree node (Col.18, lines 10-34).

Consider **claims 24 and 50**. The combination of Beming and Wang teach the method of claim 1. Further, Wang teaches wherein the method comprises the further step of: terminating DHO functionality at the first DHO tree node for a macro diversity leg towards a hierarchically lower DHO tree node based on the reception of an

indication that said hierarchically lower DHO tree node no longer uses the macro diversity leg (Col.16, lines 55, 61 teach foreign transceivers as read on tree node no longer uses the macro diversity leg).

7. Claims 4, 6, 20, 21, 22, 31, 33, 46, 47, 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beming et al. (US 2003/0003919 A1) in view of Wang (US 5,539,922) and further view of Molander et al. (US 2004/0203640 A1).

Consider **claims 4 and 31**. The combination of Beming and Wang teach the method according to any of the claim 1, **but is silent on** wherein said transport layer addresses are IP addresses and said transport bearer reference parameters are UDP ports.

In an analogous art, **Molander teaches** wherein said transport layer addresses are IP addresses and said transport bearer reference parameters are UDP ports (Paragraphs [0029-0030]).

Therefore, it would have been obvious at the time that the invention was made to modify Beming and Wang with Molander's system teaches wherein said transport layer addresses are IP addresses and said transport bearer reference parameters are UDP ports in order to improve the connection without interruption.

Consider **claims 6 and 33**. The combination of Beming and Wang teach the method according to any of claim 1. Further, Molander teaches comprising the step of:

including in the first signaling message Quality of Service (QoS) indications for the data flow(s) to be directed (Paragraph [0012]).

Consider **claims 20 and 46**. The combination of Beming and Wang and Gopalakrishna teach the method according to claim 19. Further, Molander teaches wherein said implicit information comprises a source IP addresses and a source UDP port retrieved from the IP header and the UDP header of a received uplink packet (Paragraphs [0023-025]).

Consider **claims 21 and 47**. The combination of Beming and Wang and Gopalakrishna teach the method according to claim 20. Further, Wang teaches wherein said source IP address is different from the source IP addresses used for packets received from a hierarchically higher DHO tree node and other hierarchically lower DHO tree nodes than said hierarchically lower DHO tree node from which said uplink packet was received (Col.8, lines 14-39).

Consider **claim 22 and 48**. The combination of Beming and Wang and Gopalakrishna teach the method according to claim 20. Further, Molander teaches wherein the method comprises the further step of: using said retrieved source IP address and UDP port at the first DHO tree node as the destination IP address and destination UDP port for the split downlink data flow for said macro diversity leg towards

said hierarchically lower DHO tree node (Paragraphs [0024-0025]).

8. Claims 5, 16-18, 32 and 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beming et al. (US 2003/0003919 A1) in view of Wang (US 5,539,922) and further view of Willars et al. (US 2001/0053145 A1).

Consider **claims 5 and 32**. The combination of Beming and Wang teach the method according to claim 1, **but is silent on** wherein said transport layer addresses are ATM addresses and said transport bearer reference parameters are SUGR parameters.

In an analogous art, **Willars teaches** wherein said transport layer addresses are ATM addresses and said transport bearer reference parameters are SUGR parameters (Paragraphs [0066], [0090]).

Therefore, it would have been obvious at the time that the invention was made to modify Beming and Wang with Willars's system such that wherein said transport layer addresses are ATM addresses and said transport bearer reference parameters are SUGR parameters in order to provide connectionless using feature of SUGR parameters.

Consider **claims 16 and 42**. The combination of Beming and Wang teach the method according to claim 15. Further, Willars teaches wherein said destination node transport layer address is an IP address (Paragraph [0031], [0042]).

Consider **claims 17 and 43**. The combination of Beming and Wang teach the method according to claim 15. Further, Willars teaches wherein said destination node transport layer address is an ATM address (Paragraphs [0031], [0042]).

Consider **claims 18 and 44**. The combination of Beming and Wang teach the method according to claim 1. Further, Willars teaches wherein the mobile telecommunication network is a UMTS network (Paragraphs [0048]).

9. Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beming et al. (US 2003/0003919 A1) in view of Wang (US 5,539,922) and further view of Gopalakrishna et al. (US 2002/0183053 A1).

Consider **claims 19**. The combination of Beming and Wang teach the method according to claim 1, **but is silent on** wherein the method comprises the further step of: using implicit information at the first DHO tree node in data received from a hierarchically lower DHO tree node to trigger the initiation of DHO functionality for a macro diversity leg towards the hierarchically lower DHO tree node, wherein said DHO functionality comprises splitting and combining of data flows.

In an analogous art, **Gopalakrishna teaches** wherein the method comprises the further step of: using implicit information at the first DHO tree node in data received from a hierarchically lower DHO tree node to trigger the initiation of DHO functionality for a macro diversity leg towards the hierarchically lower DHO tree node, wherein said DHO functionality comprises splitting and combining of data flows (Paragraph [0037]).

Therefore, it would have been obvious at the time that the invention was made to modify Beming and Wang with Gopalakrishna's system's such that wherein said DHO functionality comprises splitting and combining of data flows in order to keep the communication with out interruption.

10. Claims 25 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beming et al. (US 2003/0003919 A1) in view of Wang (US 5,539,922) and further view of Gerry et al. (US 2004/0029615 A1).

Consider **claims 25 and 51**. The combination of Beming and Wang teach the method of claim 24, **but is silent on** wherein said indication is a Destination Unreachable Internet Control Message Protocol, ICMP, message.

In an analogous art, **Gerry teaches** wherein said indication is a Destination Unreachable Internet Control Message Protocol, ICMP, message (Paragraph [0033], Fig.3 Illustrate and described).

Therefore, it would have been obvious at the time that the invention was made to modify Beming and Wang with Gerry's system's such that wherein said indication is a Destination Unreachable Internet Control Message Protocol, ICMP, message in order to improve the controlling and keeping communication without interruptions.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIET DOAN whose telephone number is (571)272-7863. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Appiah N. Charles can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kiet Doan/
Examiner, Art Unit 2617

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617

